This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-54. (Canceled)

- 55. (New) An isolated sweet taste receptor comprising a T1R3 polypeptide, wherein the T1R3 polypeptide is encoded by a nucleotide sequence that hybridizes under moderately stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 56. (New) The isolated receptor of claim 55, wherein the T1R3 polypeptide is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 57. (New) The isolated receptor of claim 55, wherein the T1R3 polypeptide has an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 58. (New) The isolated receptor of claim 55, wherein the receptor comprises a T1R3 polypeptide and a heterologous polypeptide.
- 59. (New) The isolated receptor of claim 58, wherein the T1R3 polypeptide and the heterologous polypeptide are non-covalently linked.
- 60. (New) The isolated receptor of claim 58, wherein the T1R3 polypeptide and the heterologous polypeptide are covalently linked.

- 61. (New) The isolated receptor of claim 58, wherein the heterologous polypeptide is a T1R2 polypeptide that is encoded by a nucleotide sequence that hybridizes under moderately stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 62. (New) The isolated receptor of claim 58, wherein the heterologous polypeptide is a T1R2 polypeptide is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 63. (New) The isolated receptor of claim 62, wherein the T1R2 polypeptide has an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 64. (New) The isolated receptor of claim 55, wherein the receptor has G protein coupled receptor activity.
- 65. (New) The isolated receptor of claim 55, wherein the receptor specifically binds to antibodies raised against SEQ ID NO: 15, 20, 23, or 25.
- 66. (New) An isolated sweet taste receptor comprising a T1R3 polypeptide and a T1R2 polypeptide, wherein the T1R3 polypeptide is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:15, 20, 23, or 25; and wherein the T1R2 polypeptide that is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 67. (New) An antibody that specifically binds to the taste receptor claim 55.

- 68. (New) The antibody of claim 67, wherein the antibody specifically binds to a taste receptor comprising T1R2 and T1R3.
- 69. (New) The antibody of claim 67, wherein the T1R2 polypeptide and the T1R3 polypeptide are non-covalently linked.
- 70. (New) The antibody of claim 67, wherein the T1R2 polypeptide and the T1R3 polypeptide are covalently linked.
- 71. (New) An isolated polypeptide encoded by a nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 72. (New) The polypeptide of claim 71, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 73. (New) The polypeptide of claim 71, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 74. (New) The polypeptide of claim 71, wherein the polypeptide is encoded by nucleic acid that has a nucleotide sequence of SEQ ID NO:14, 19, 22, or 24.
- 75. (New) An antibody that specifically binds to the polypeptide of claim 71.

- 76. (New) An isolated nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 77. (New) The nucleic acid of claim 76, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 78. (New) The nucleic of claim 76, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.
- 79. (New) The nucleic acid of claim 76, wherein the nucleic acid that has a nucleotide sequence of SEQ ID NO:14, 19, 22, or 24.
- 80. (New) An isolated polypeptide encoded by a nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 81. (New) The polypeptide of claim 80, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 82. (New) The polypeptide of claim 80, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 83. (New) The polypeptide of claim 80, wherein the polypeptide is encoded by nucleic acid that has a nucleotide sequence of SEQ ID NO:10, 11, or 12.

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84. (New) An antibody that specifically binds to the polypeptide of claim 80.

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- 85. (New) An isolated nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 86. (New) The nucleic acid of claim 85, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 87. (New) The nucleic of claim 85, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.
- 88. (New) The nucleic acid of claim 85, wherein the nucleic acid that has a nucleotide sequence of SEQ ID NO:10, 11, or 12.